

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/038816

A. CLASSIFICATION OF SUBJECT MATTER
INV. G06F1/16 H04M1/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G06F H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 353 529 B1 (CIES THOMAS) 5 March 2002 (2002-03-05)	11
Y	column 2, line 17 - column 5, line 48 column 6, line 66 - column 8, line 14 column 14, line 58 - column 15, line 43 abstract; figures 1-3, 4A, 4B, 11A-11C -----	1-10, 20, 21
Y	WO 01/77786 A (DANGER RESEARCH, INC) 18 October 2001 (2001-10-18) page 19, line 14 - page 22, line 5 ----- -/--	1-10, 20, 21

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

15 March 2006

Date of mailing of the international search report

09.06.2006

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 2004/049150 A (DANGER, INC) 10 June 2004 (2004-06-10) paragraphs [0067] - [0092] paragraphs [0009], [0029], [0030], [0038], [0040], [0041], [0043], [0044], [0048], [0050], [0051] -----	1-11,20, 21
X Y	US 6 397 078 B1 (KIM YOUNG S) 28 May 2002 (2002-05-28) column 1, lines 10-16,48-61 column 2, line 47 - column 3, line 20; figures 3,4 -----	11 1-10,20, 21
X Y	US 2001/048589 A1 (BRANDENBERG CARL BROCK ET AL) 6 December 2001 (2001-12-06) paragraphs [0062], [0068] - [0072], [0079] -----	11 1-10,20, 21

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-10, 11, 20-21

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.:

Independent Claim 24 is self contradictory, in that the third component layer is defined as:

- "movably connected to one of the first component layer and the second component layer" and
- "movable in a second direction relative to the second component layer to expose a second set of functional components and activate a second operational mode".

This combination is neither clear nor supported by the description; hence "no meaningful opinion can be formed on the questions of novelty, inventive step, or industrial applicability of the claimed invention", cf. PCT Guidelines 17.31, this applying to claims 24 and 25.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-10, 11, 20-21

An electronic device, comprising: a first module layer movable in a first direction; a second module layer movably connected relative to the first module layer; and a third module layer movably connected relative to the second module layer and movable in a second direction.

And a method for providing a versatile user interface for an electronic device, the device including a display and a plurality of input means, each deployable in a different direction, the method comprising: deploying one of a plurality of input means; detecting which one of the plurality of input means is deployed; and orienting information presented on the display based on the deployed input means.

2. claims: 12-15

An electronic device, comprising: a first module layer movable in a first direction; a second module layer movably connected relative to the first module layer; and a third module layer movably connected relative to the second module layer and movable in a second direction, wherein the first module layer comprises a first set of functional components, the second module layer comprises a second set of functional components and the third module layer comprises a third set of functional components, and wherein the device comprises a first operational mode utilizing the first set of functional components, a second operational mode utilizing the second set of functional components and a third operational mode utilizing the third set of functional components, wherein each operational mode is actuated based on a predetermined relative position of the first module layer, the second module layer and the third module layer.

3. claims: 16-17

An electronic device, comprising: a first module layer movable in a first direction; a second module layer movably connected relative to the first module layer; and a third module layer movably connected relative to the second module layer and movable in a second direction, further comprising a first connector connecting the first module layer and the second module layer, wherein the first connector allows at least linear movement substantially parallel to the first direction.

4. claim: 18

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

An electronic device, comprising: a first module layer movable in a first direction; a second module layer movably connected relative to the first module layer; and a third module layer movably connected relative to the second module layer and movable in a second direction, wherein the first direction and the second direction are substantially perpendicular.

5. claim: 19

An electronic device, comprising: a first module layer movable in a first direction; a second module layer movably connected relative to the first module layer; and a third module layer movably connected relative to the second module layer and movable in a second direction, further comprising a communications module having an input and an output respectively for receiving and transmitting a wireless signal.

6. claims: 22-23

An electronic device, comprising: a first module layer movable in a first direction; a second module layer movably connected relative to the first module layer; and a third module layer movably connected relative to the second module layer and movable in a second direction, wherein the second module layer further comprises a first input mechanism exposable when the first module layer moves in the first direction relative to the second module layer, and wherein the third module layer further comprises a second input mechanism exposable when the third module layer moves in the second direction relative to the second module layer.

7. claim: 24

A portable electronic device, comprising: a first component layer movable in a first direction; a second component layer having a first set of functional components, the second component layer movably connected relative to the first component layer such that movement of the first component layer in the first direction exposes the first set of functional components and activates a first operational mode; and a third component layer having a second set of functional components, the third component layer movably connected to one of the first component layer and the second component layer, the third component layer movable in a second direction relative to the second component layer to expose a second set of functional components and activate a second operational mode.

8. claims: 25-26

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

A method of controlling relative movement between movable layers of an electronic device, comprising: movably connecting a first module layer to a second module layer having a first functional component such that a relative movement of the first module layer in a first direction exposes the first functional component; and movably connecting the second module layer to a third module layer having a second functional component such that a relative movement of the third module layer in a second direction exposes the second functional component. preventing movement of the third module layer in the second direction during movement of the first module layer in the first direction.

9. claims: 27-28

A method for providing a versatile user interface for an electronic device, comprising: exposing a first set of functional components on a second module layer movably connected to a first module layer, where the first set of functional components is associated with a first operational mode of the electronic device; and exposing a second set of functional components on a third module layer movably connected to the second module layer, where the second set of functional components is associated with a second operational mode of the electronic device.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6353529	B1	05-03-2002	NONE	
WO 0177786	A	18-10-2001	AU 3296501 A CN 1448042 A EP 1279086 A2 JP 2004518182 T	23-10-2001 08-10-2003 29-01-2003 17-06-2004
WO 2004049150	A	10-06-2004	AU 2003291132 A1 EP 1570333 A2	18-06-2004 07-09-2005
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US 2001048589	A1	06-12-2001	US 2004174666 A1	09-09-2004